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**GEOLOGICAL REPORT ON THE BETTY CLAIMS**

<u>Claim Name</u>	<u>Record No.</u>	<u>Units</u>	<u>Recording Date</u>
Betty No.1	8570	1	March 22, 1990
Betty No.2	8569	1	March 22, 1990
Betty No.3	8568	1	March 22, 1990
Silver Cliff	8542	1	March 22, 1990

Divide Lake Area,  
Skeena Mining Division, British Columbia  
N.T.S. Map Area 104A/4  
Latitude 56° 13'N Longitude 129° 59'W

for

EUREKA RESOURCES, INC.  
837 East Cordova St.  
Vancouver, B.C.  
V6A 3R2

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

by

K.V. Campbell, Ph.D.  
January 1991

**20,905**

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## 1 INTRODUCTION

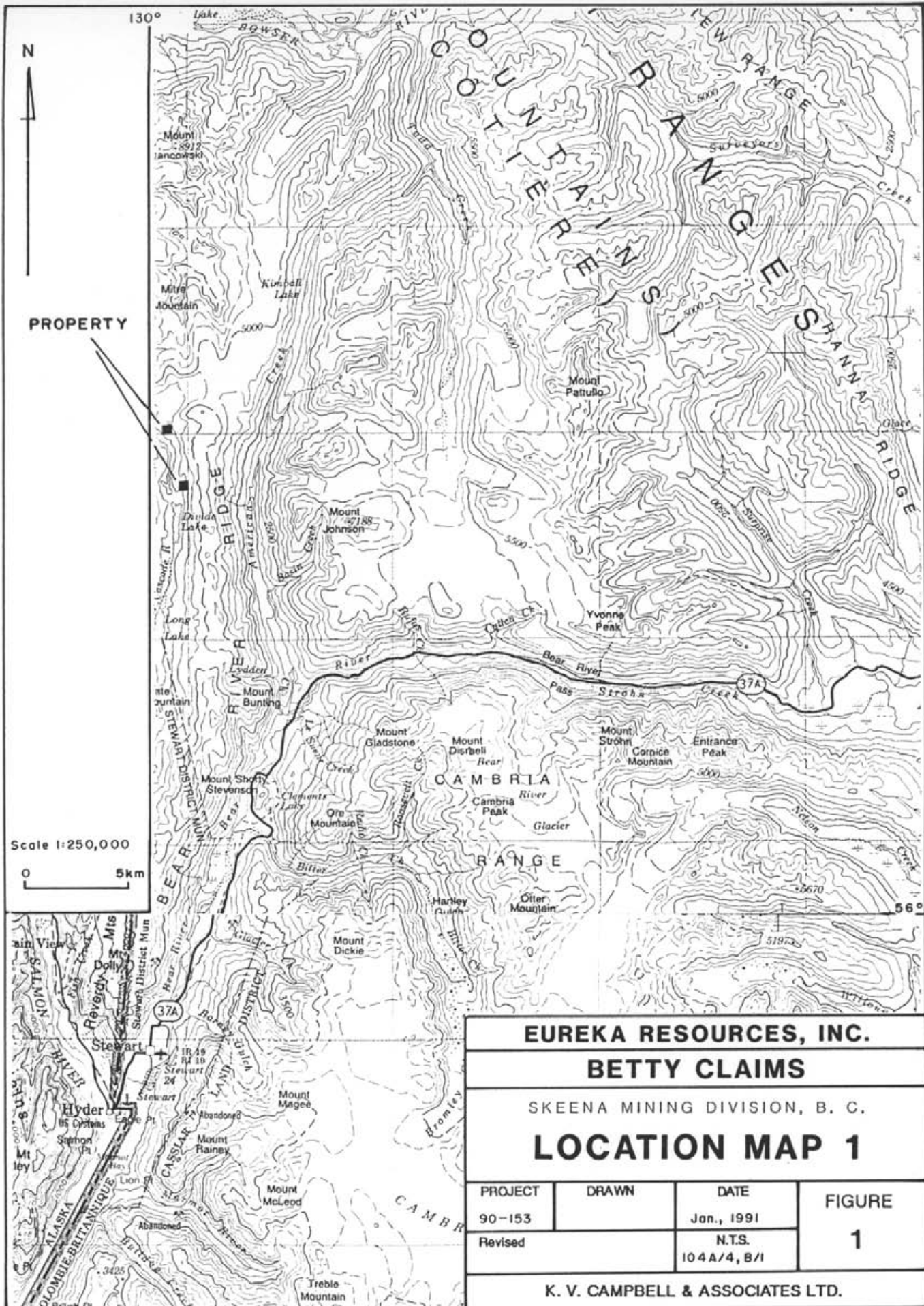
At the request of Eureka Resources, Inc., K.V. Campbell & Associates Ltd. conducted a review and reconnaissance geological examination of the Betty claims in the Skeena Mining Division of northwestern British Columbia. The study included an air photo interpretation and field work on the claims from June 29 to July 3, 1990.

### 1.1 Location, Access and Topography

The Betty Claims are located in the Skeena Mining Division about 32km north of Stewart and 12km north northeast of the Big Missouri mine (Figures 1 and 2). The claims are centered approximately at 56° 13' North latitude and 129° 59' West longitude, situated within National Topographic Series map sheet 104A/4. Access is by helicopter or by hiking north along the Long and Divide Lakes valley from the Big Missouri mine road.

The claims lie along the east side of the Divide Lake valley, on moderate to steep mountainous slopes below an icefield (Figure 2). Relief is about 1,100ft (340m), from 3,400ft (1,030m) to 4,500ft (1,370m). The lower parts of the claims are on sparsely tree covered slopes with numerous rock exposures. Rock cliffs and talus slopes occur along the eastern margins of the claims.

An old cabin site is located about 100m south of the Betty No.1 claim and provides a camping spot. Apart from rotted timbers and a miscellaneous garbage at this site, no evidence was seen of any exploration or mining activity.



**EUREKA RESOURCES, INC.**

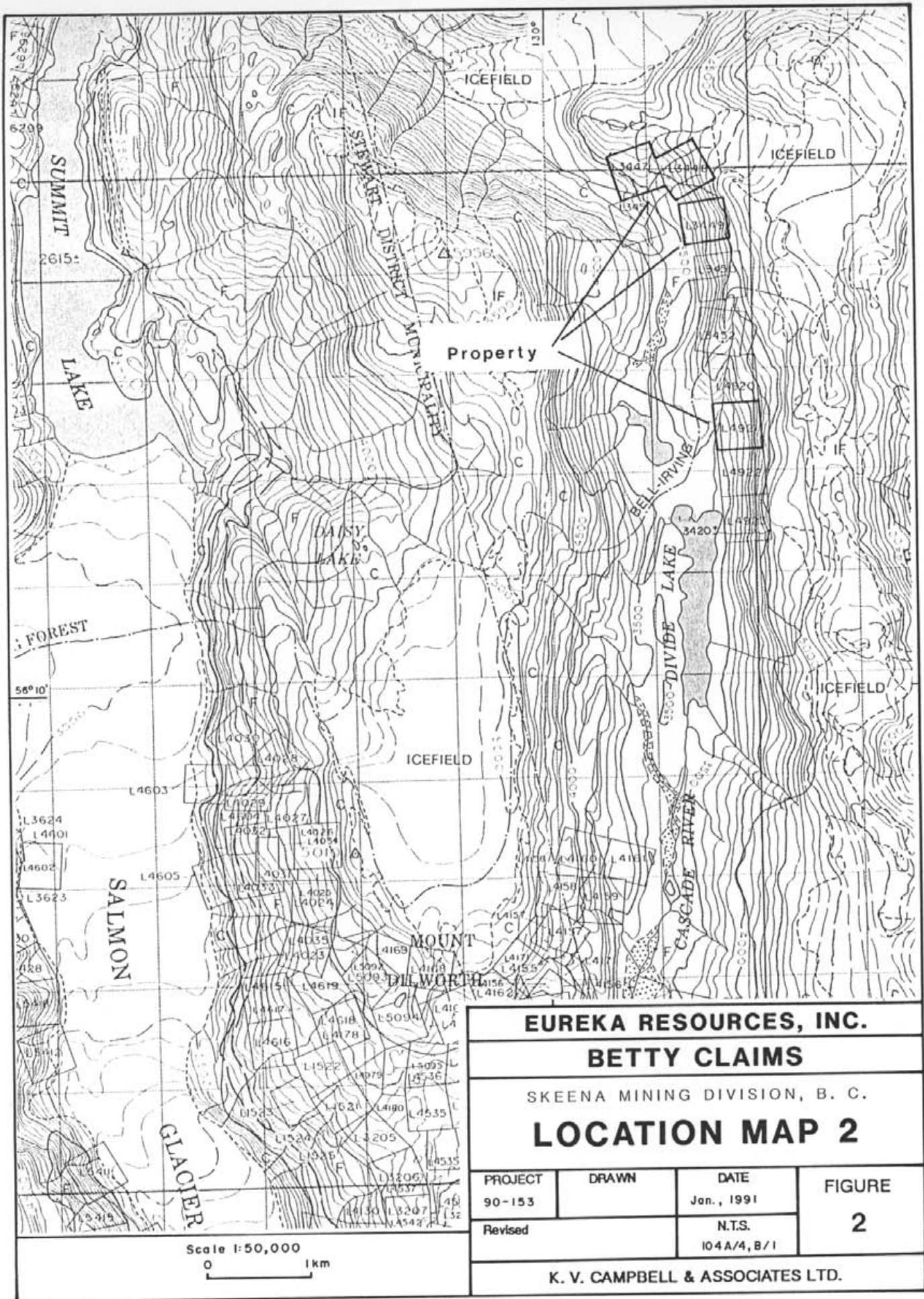
**BETTY CLAIMS**

SKEENA MINING DIVISION, B. C.

**LOCATION MAP 1**

PROJECT	DRAWN	DATE	FIGURE
90-153		Jan., 1991	
Revised		N.T.S. 104 A/4, B/1	<b>1</b>

**K. V. CAMPBELL & ASSOCIATES LTD.**



<b>EUREKA RESOURCES, INC.</b>			
<b>BETTY CLAIMS</b>			
SKEENA MINING DIVISION, B. C.			
<b>LOCATION MAP 2</b>			
PROJECT 90-153	DRAWN	DATE Jan., 1991	FIGURE <b>2</b>
Revised		N.T.S. 104A/4, B/1	
<b>K. V. CAMPBELL &amp; ASSOCIATES LTD.</b>			

Scale 1:50,000  
0 1 km

During the period of the site visit (late June and early July) the region was largely snow covered and most of the talus slopes and drainageways could not be examined. There was no shortage of water at this time. Lakes in the valley were completely frozen over.

### 1.2 Claim Ownership and Status

The property consists of four, two post claims whose record numbers are listed in Table 1. Eureka Resources, Inc. is the owner of all of the claims, shown in Figure 2.

Table 1. Summary of claim particulars

<u>Claim Name</u>	<u>Record Number</u>	<u>Lot Number</u>	<u>Record Date</u>
Betty No.1	8570	3447	March 22, 1990
Betty No.2	8569	8569	March 22, 1990
Betty No.3	8568	3449	March 22, 1990
Silver Cliff	8542	4921	March 22, 1990

### 1.3 History

The Betty claims were originally located in 1920 and crown granted in 1927. The two post claims reverted to the crown and were purchased by Eureka Resources, Inc. in 1990. The American Mining and Milling Co. worked the Betty claims the 1920's, as described in B.C. Ministry of Mines Reports for 1922 (Appendix I). This company developed an open-cut, a few pits, inclined shaft (25ft long) and a short tunnel (12-15ft

long) on sulphide-bearing quartz veins. These workings, which are believed to be located on the south edge of the Betty No.1 claim or on the west edge of Betty No.2 claim., could not be found during the 1990 site visit. In 1980, A. Ingelson reported that the tunnel was still intact. Possibly they have since been covered by talus slides or were covered with snow at the time of the 1990 work.

In the 1920's mineralization on the Betty claims was reported in narrow lenses of quartzose rock within a schistose belt of rocks 1 to 4ft wide developed at the contact of argillite and overlying volcanic rocks. Pyrite, galena, sphalerite, chalcopryrite and silver sulphides were reported to occur in the quartz. Assays of up to 400 oz/ton silver are reported in the B.C. Ministry of Mines Report (Appendix I). The 12-15ft tunnel was driven along the argillite-volcanic rock contact and exposed a slightly mineralized, brecciated vein 1-2ft in width. The open-cut was made at right angles to the vein (and short tunnel). A second tunnel was apparently started, but never completed, below the open-cut with the objective of reaching the contact 125ft below the open-cut.

A prospector, A. Ingelson, owned the six Betty claims in 1980. He chip sampled three locations; the open-cut, tunnel and one of the pits and reported average silver assays to 59.14 oz/ton, average gold assays to 0.08 oz/ton, and average values of 0.18% Cu, 1.44% Pb and 4.90% Zn. Most likely these were selected samples of sulphide-rich material.

Another mineral occurrence, the Silver Cliff, is shown on Alldrick's Open File 1987-22 map, plotting approximately within the Silver Cliff claim 1km north of Divide Lake. The only mention of this occurrence that could be found is that



by Grove (1971) in describing the Silver Crown occurrence which lies some 4km to the south, as per Alldrick's map. Grove states that the Silver Cliff claim "was originally located in this section", presumably meaning that Silver Crown claim group encompassed the Silver Cliff claim. Mineralization is described as sulphide minerals in simple quartz breccia veins and carbonate lenses emplaced along fractures. Veins widths are given as 6 inches to 7 feet.

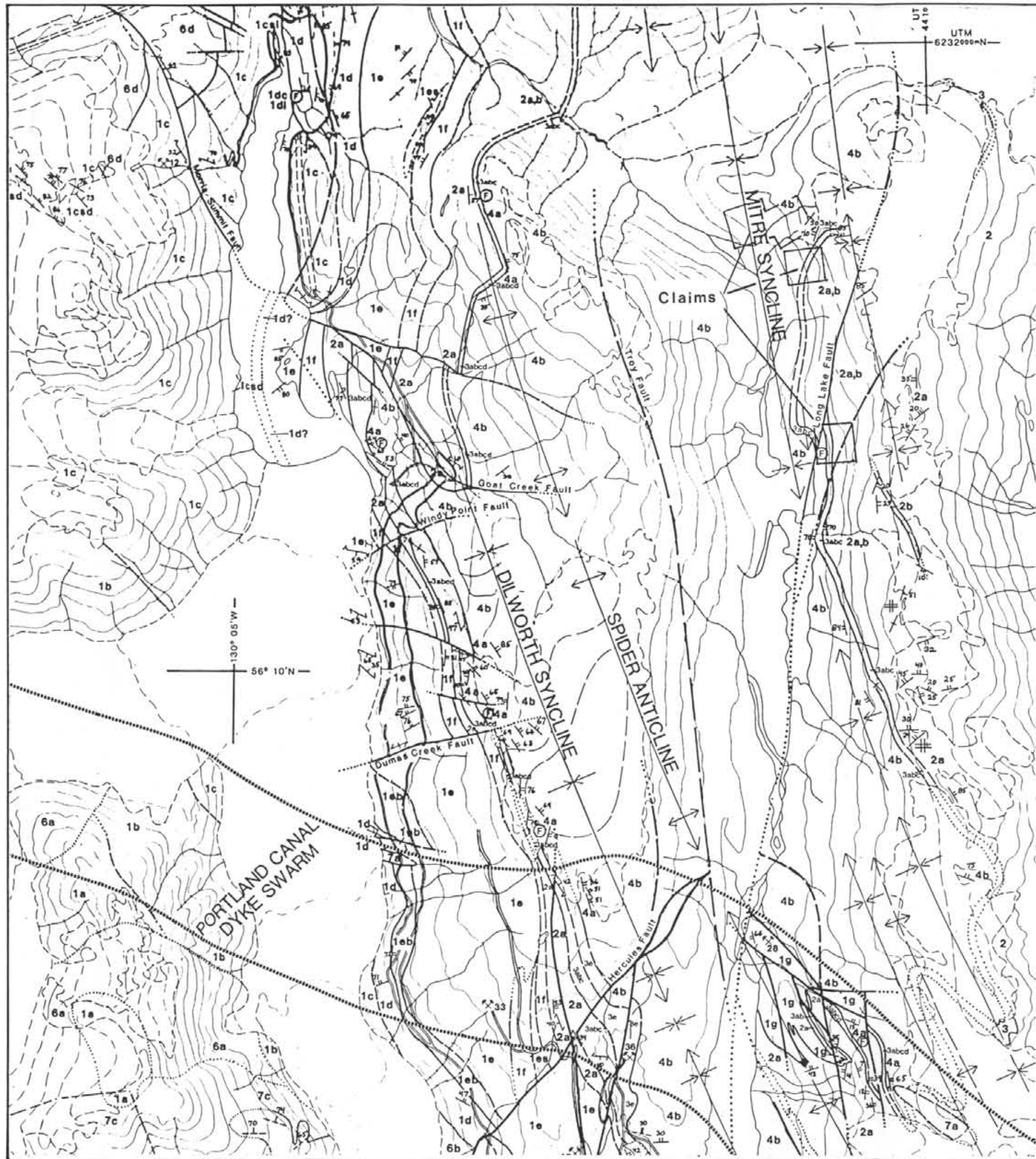
## 2 GEOLOGY

### 2.1 Regional

Figure 3 shows the regional geology of the area, as presented by Alldrick, 1984. The area lies along the western margin of the Intermontane Tectonic belt. It is characterized by a north-northwesterly trending belt of folded Upper Triassic to Lower Jurassic volcanic rocks which contain a thick sedimentary sequence infolded along a synclinal axis (Alldrick, 1984). Both the volcanic and sedimentary rocks, which are correlated with the Hazelton Group and termed the Stewart Complex (Grove, 1986), are intruded by small stocks and extensive dyke swarms.

The Hazelton Group has been divided into four units: No.1, the basal Unuk River Formation, an andesitic sequence; No.2, the Betty Creek Formation, a coarse clastic sequence; No.3, the Mount Dilworth Formation, a felsic volcanic sequence, and No.4, the Salmon River Formation, a siltstone sequence. The major structural feature is the Mount Dilworth syncline which trends north-northwest and is doubly plunging. A minor thrust fault encircles the Dilworth syncline, separating the sedimentary rocks of the Salmon River Fm. from the underlying volcanic rocks.

Current geological opinion is that mineral deposits within the Stewart Complex are related to Lower Jurassic island arc volcanic centers, one of the more prominent of which is the Mount Dilworth center in the Big Missouri and Premier mining camps, about 15km south of the Betty claims.



**ROCK UNITS**

- EARLY TO MIDDLE EOCENE**  
 Hyder Quartz Monzonite Suite  
 7c Boundary stock; biotite granodiorite  
 7a Hyder dykes; granodiorite
- EARLY JURASSIC**  
 Texas Creek Granodiorite Suite  
 6a,b Granodiorite
- TRIASSIC-JURASSIC**  
 Hazelton Group  
 Salmon River Formation  
 4b Carbonaceous and calcareous siltstone, shale, argillite  
 4a Basal member; grits, siltstone, sandstone
- Mount Dilworth Formation  
 3d Pyritic lapilli tuff  
 3c Upper lapilli tuff  
 3b Middle welded tuff  
 3a Lower dust tuff
- Betty Creek Formation  
 2b Andesite to dacite tuffs and flows  
 2a Sedimentary rocks
- Unuk River Formation  
 1g Augite porphyry flows  
 1f Premier porphyry flows  
 1e Upper andesite tuffs  
 1d Upper siltstone member  
 1c Middle andesite tuffs  
 1b Lower siltstone member  
 1a Lower andesite tuffs

**MINERAL PRODUCERS**

- 12 SCOTTIE GOLD  
 28 SPIDER  
 33 BIG MISSOURI GROUP  
 36 SILVER TIP

- Bedding  
 Fault  
 Mineral Producer

SCALE: 1:50,000  
 KILOMETRE

**20,905**  
**GEOLOGICAL BRANCH**  
**ASSESSMENT REPORT**

<b>EUREKA RESOURCES, INC.</b>			
<b>BETTY CLAIMS</b>			
SKEENA MINING DIVISION, B. C.			
<b>REGIONAL GEOLOGY</b>			
PROJECT 90-153	DRAWN	DATE Jan., 1991	FIGURE <b>3</b>
Revised	N.T.S. 104A/4, B/1		
K. V. CAMPBELL & ASSOCIATES LTD.			

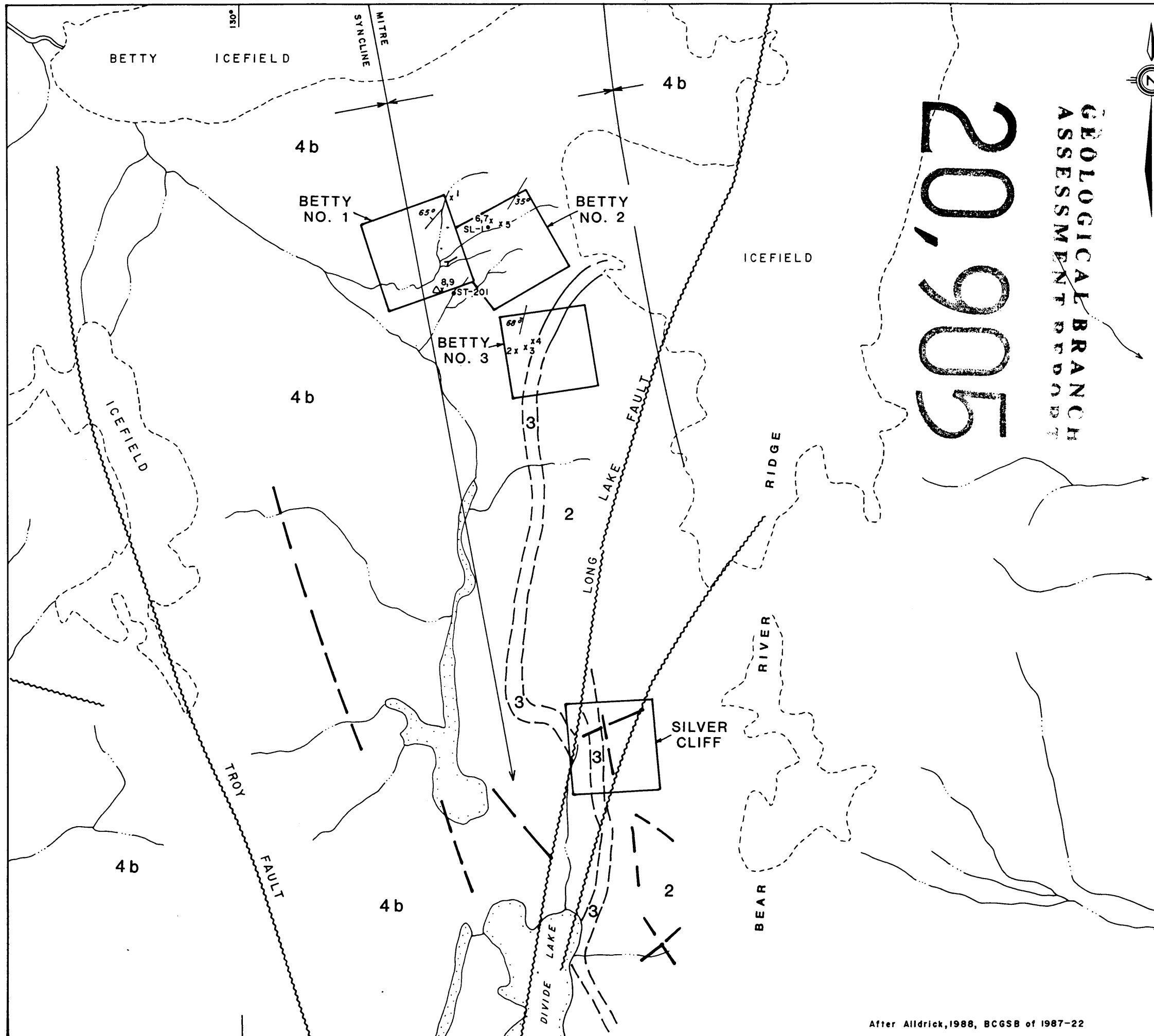
Mineral deposits associated with the volcanic centers include veins, breccia veins, replacement deposits and transitional types (Grove, 1971). The structural settings include stratabound sulphide deposits, massive sulphide vein deposits in major shear zones and quartz breccia vein deposits (Alldrick, 1983).

## 2.2 Property

Figure 4 is a 1:20,000 scale compilation of Alldrick's geological mapping, showing the location of samples collected in 1990. Samples are described in Table 2. Analyses were performed by ACME Analytical Laboratories Ltd. of Vancouver, B.C. and the analytical certificates are given in Appendix II.

### 2.2.1 Lithology










The Betty claims are mostly underlain by dark gray to black, thin bedded siltites and argillites of the Salmon River Fm. (unit 4, Figures 3 and 4). In some areas these rocks contain a few percent of fine, disseminated pyrite and are quite rusty weathering. The siltites and argillites commonly have quartz stringers and narrow quartz veins, which may or may not be brecciated. The band of Mount Dilworth volcanoclastics and underlying coarse clastics of the Betty Creek Fm. on the Betty No.3 claim were covered by ice and snow at the time of the site examination, as were these same formations on the Silver Cliff claim.



After Alldrick, 1988, BCGSB of 1987-22

**ROCK UNITS**

- TRIASSIC-JURASSIC  
 Hazelton Group  
 Salmon River Formation  
 4b Carbonaceous and calcareous siltstone, shale, argillite  
 Mount Dilworth Formation  
 3 Volcaniclastics  
 Betty Creek Formation  
 2 Volcaniclastics and sedimentary rocks

-  Bedding
-  Syncline
-  Fault
-  Fracture
-  Approximate location of adit
-  Rock sample
-  Soil sample
-  Silt sample
-  Campsite

SCALE: 1:20,000

Metres 0 500 1000 Metres

**EUREKA RESOURCES, INC.**

**BETTY CLAIMS**

SKEENA MINING DIVISION, B. C.

**COMPILATION MAP**

PROJECT 90-153	DRAWN	DATE Jan., 1991	FIGURE <b>4</b>
Revised	N.T.S. 104A/4, B/1		

K. V. CAMPBELL & ASSOCIATES LTD.

Table 2. Sample descriptions

<u>Sample No.</u>	<u>Location</u>	<u>Description</u>
153-1	NE Betty No.1	drusy quartz vein, 1-1/2m wide, in black argillite, galena-bearing limonite selvage on one side of vein
153-2	Betty No.3	quartz breccia, 5-10cm wide, with angular fragments of fine grained, gray silicified volcanoclastic
153-3	Betty No.3	drusy quartz breccia vein, 5-10cm wide, limonite coated
153-4	Betty No.3	drusy quartz stockwork, 2-3m wide, in black siltstone
153-5	Betty No.2	thin bedded, black siltite and argillite with 1-2% fine pyrite. Pyrite coated joint surfaces, crosscut by quartz and pyrite stringers.
153-6	Betty No.2	bedded quartz vein, 30cm wide, in black carbonaceous siltstone
153-7	Betty No.2	quartz breccia from fault zone, fine crystalline quartz with angular fragments of silicified, dark gray siltstone(?), minor limonite
153-8	campsite	rock pile, fine to medium grained galena, sphalerite, minor pyrite in vein quartz with angular fragments of light gray felsite
153-9	campsite	rock pile, massive sphalerite, minor pyrite crosscut by quartz veins.

The Mount Dilworth Fm. (unit 3, Figures 3 and 4) is a relatively thin (+/- 50m) succession of predominantly subaerial, felsic volcanic tuffaceous and pyroclastic beds. Many of the volcanoclastic members are brightly colored.

The Betty Creek Fm. (unit 2, Figures 3 and 4) is a thick interbedded sequence of tuffs and coarse epiclastic rocks.

### 2.2.2 Structure

The claims lie on the westerly dipping limb of the Mitre Syncline. Outcrops seen on the Betty claims have variable bedding attitudes and it is likely there are several subsidiary folds not shown on the 1:50,000 scale maps. Slaty cleavage is well developed locally. Its attitude is not consistent, and it is probable that there is a second period of fold deformation represented.

Major faults include the Long Lake Fault and an unnamed parallel fault crossing the Silver Cliff claim. The Long Lake Fault zone is marked by a prominent lineament with a pronounced color anomaly on the Silver Cliff claim. On the Betty No.2 claim, where sample 153-7 was taken, a 30cm wide quartz vein occurs in a fault zone cutting argillites. This fault trends northeast and is near vertical.

Veining in the argillites and siltites ranges from isolated, narrow quartz stringers to wider, drusy veins, quartz veins with brecciated host rock fragments to 5cm and 2 to 3m wide quartz stockwork zones. The following vein attitudes were

noted:

- 1) bedded; parallel to enclosing siltstones and argillites, includes 1 stockwork occurrence, 20cm to 2m wide
- 2) parallel to synclinal axis; near vertical,  $\frac{1}{4}$ - $\frac{1}{2}$ m wide
- 3) northeast strike; near vertical, 5-10cm wide
- 4) east-west strike, steep southerly dip; veins 5-10cm wide, one stockwork zone  $2\frac{1}{2}$ m wide

### 2.2.3 Mineralization

Table 3 lists partial analytical results of the 1990 sampling. Complete analyses are given in Appendix II. Of all the quartz veins seen in the black siltite and argillite on the Betty claims only one contained sulphides; sample 153-1 with a selvage of limonite coated galena and reporting 26.7ppm Ag. This was from a  $\frac{1}{4}$  to  $\frac{1}{2}$ m wide drusy quartz vein with a north-northeast strike and near vertical dip, thought to be aligned along the axial plane direction of the Mitre Syncline.

The vein on which the old Betty workings were developed is reported to strike at S.45°E. (B.C.M.M. Annual Report 1922) and have a width of 6 inches within a "schist-belt" 1 to 4ft wide. The quartz was reportedly mineralized with pyrite, galena, sphalerite, chalcopyrite and minor patches of silver sulphides. Very probably, but not positively, the vein samples piled at the old cabin site are from this site. Samples of this material (samples 153-8 and 9) both contained abundant sulphides, 153-9 carrying 36.96 oz/ton silver.



Table 3. Summary of analyses\*.

<u>Sample No.</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Ag</u>	<u>Au</u>
153-1	124	500	112	26.7	8
153-2	11	6	20	.7	1
153-3	5	5	11	.4	1
153-4	4	3	6	1.0	1
153-5	61	41	112	2.0	1
153-6	11	34	66	.3	1
153-7	20	21	115	4.9	2
153-8	320	20114	43930	26.2	1
153-9	5006	9420	22201	275.4	800

\* all values in ppm except for gold in ppb.

#### 2.2.4 Geochemical Sampling

Silt sample 153-ST-201, taken on small creek near the campsite carried 1.5ppm Ag and 3 ppb Au (Appendix II). A sample of talus fines, 153-SL-1, collected below the vein occupied fault zone at 153-7, carried 10.3ppm Ag and 7 ppb Au.

Talus and soil contour sampling would be an effective way of prospecting the claims area.

### 3 CONCLUSIONS AND RECOMMENDATIONS

The work was hampered by the widespread snow cover but it was apparent that veins occupy fracture zones. It needs to be determined what fracture set(s) mineralized veins occur in. It is possible that an understanding of the fractures could lead to the identification of more major zones of fissuring where veining is concentrated. In particular the major fault zones crossing the Silver Cliff claim should be prospected. The band of Mount Dilworth Fm. felsic rocks should be traversed, prospected and sampled with particular attention paid to exposures near the Long Lake Fault and to the parallel fault to the east.

#### 4 BIBLIOGRAPHY

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British Columbia Minister of Mines, Annual Report, 1922; p.83-84.

Grove, E.W., 1971; Geology and Mineral Deposits of the Stewart Area, B.C., British Columbia Department of Mines and Petroleum Resources, Bulletin No.58.

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Ingelson, A., 1980; Mineralogy and Sampling of the Betty Claims, Assessment Report No.8939, 6pp.

5 ITEMIZED COST STATEMENTFees:

K.V. Campbell,	
6½ days @ \$400/d .....	\$ 2,600
25 hours @ \$50/h .....	1,250

Disbursements:

Reports, maps .....	27.50
Air photos .....	86.43
Telephone .....	25.57
Accomodation .....	149.12
Helicopter .....	863.33
Meals, groceries .....	209.12
Analyses .....	153.94
Fuel .....	185.23
Vehicle rental .....	831.33
Drafting .....	245.20
Reprographics .....	27.50
Materials .....	<u>50.00</u>

Total ..... \$ 6,704.27


K.V. Campbell  
K.V. Campbell, Ph.D., F.G.A.C.

6 CERTIFICATE

I, KENNETH VINCENT CAMPBELL, resident of Vancouver,  
Province of British Columbia, hereby certify as follows:

- 1) I am a Consulting Geologist with an office at #4 - 84  
Lonsdale Ave., North Vancouver, British Columbia.
- 2) I graduated with a degree of Bachelor of Science,  
Honours Geology, from the University of British Columbia  
in 1966, a degree of Master of Science, Geology, from  
the University of Washington in 1969, and a degree of  
Doctor of Philosophy, Geology, from the University of  
Washington in 1971.
- 3) I have practised my profession for 24 years. I am a  
Fellow of the Geological Association of Canada (F0078).
- 4) This report, dated January 15, 1991, is based on my  
review of available reports and a site visit made to the  
Betty claims between June 29 and July 3, 1990.
- 5) I have no direct, indirect or contingent interest in the  
shares or business of Eureka Resources, Inc. nor do I  
intend to have any such interest.

Dated at Vancouver, Province of British Columbia,  
this 15th day of January, 1991.

  
\_\_\_\_\_  
K.V. Campbell, Ph.D., F.G.A.C.  
Geologist

**APPENDIX I**

B.C. Ministry of Mines  
Annual Report - 1922, p.83

There are six claims in the company's holdings—*Leslie, Leslie M., Leslie No. 2, Bush Mines, Ltd. Leslie No. 5, Leslie No. 6, and Mahood*—situated north of and adjoining the "North" group of the British Columbia Silver Mines, Limited. The company is capitalized for \$1,000,000, divided into 1,000,000 shares. Considerable work was done in 1919 on the claims, good camps were put up, and three tunnels driven. The results were not very encouraging and very little has been done since.

This group of three claims—*Spider, Spider No. 2, and Spider No. 3*—situated at the north-east end of Long lake, are held by the original stakers, Bill Hamilton and Charlie Larson. The property was under bond during 1919-20 to the Algonic Development Company, a Belgian syndicate, which did a great deal of work under the supervision of W. A. Maloche. Owing to financial difficulties, operations were discontinued and the bond relinquished, the property reverting to the original owners.

Surface showings indicate four or five quartz veins in an intrusive mass of augite porphyry. The "North" or No. 1 vein is the largest and oldest fissure and probably of lower grade than the balance of the veins. It strikes S. 55° E. up the hill and dips about 65° N.E.

Later shearing action formed a series of smaller, roughly parallel, high-grade veins converging toward the main quartz vein. A tunnel was driven 700 feet, following one of these smaller veins, encountering several lenses of good-grade milling-ore in that distance. The mineralization is galena, zinc-blende, some chalcopryrite, with silver sulphides and some native silver showing in the seams. Some surface work was done on a vein south of this, where high-grade ore assaying up to 300 oz. in silver to the ton was exposed. Should the big quartz vein carry a milling grade of ore the cross-veins would be important "sweeteners." Good camps were built and a compressor installed, but at present everything is in a state of dilapidation.

This company is a reorganization of the Mahood Mines, Limited, which was incorporated in March, 1920, with a capitalization of \$1,000,000. The present company is capitalized for \$1,500,000, divided into 1,500,000 shares. The British Columbia holdings of the company consist of the *Betty* group, the *Saurise* group, the *Daly-Sullivan* group, and the *Lois-Edith* group. The *Betty* group consists of six claims—*Betty Nos. 1 to 6*, inclusive, situated about 4 miles north of the *Spider* group on the east side of Divide lake. A small cabin was built this year at 3,500 feet elevation that will accommodate three or four men. Three men were working during the summer.

The work done on the property consists of one main open-cut to the vein, two or three pits along its strike, and a short tunnel. The main cut extends in from the surface, a distance of 40 feet, to the vein, which it strikes at right angles to the cut, at S. 45° E., and at this point appears to dip 70° W. The face of the cut gives a depth of about 15 feet on the vein, showing it to lie in a schistose belt formed on the contact of the volcanic rock above, with banded argillite on the lower side. The schist-belt is from 1 to 4 feet wide, in which are lenses of quartzose rock next to the argillite, mineralized with pyrite, galena, zinc-blende, and chalcopryrite, in which are occasional patches of silver sulphides. Samples taken where the silver sulphides show have assayed up to 400 oz. in silver to the ton. The quartzose vein in the face of the cut is about 6 inches wide. Three or four pits sunk farther north along the strike of the contact show the schists, but no mineralization. South of the big cut a short tunnel 12 to 15 feet long, driven along the contact, exposed a slightly mineralized, brecciated vein a foot or two in width. About 400 feet farther south, at 3,930 feet elevation, a slightly inclined shaft had been driven about 25 feet on what must be a cross-vein of quartz, since it lies wholly in the greenstone and strikes S. 75° E. Examination of the material on the dump shows the quartz to be very sparsely mineralized, and with a trace of silver sulphides showing occasionally.

The exposure of the argillite in the big cut shows its bedding-planes to strike S. 65° E. and dips 63° N.E. toward the contact. Small lenticular bunches of ore, showing silver sulphides and specks of silver on the seams, occur on the bedding-planes of the argillites, but are too infrequent to be important. Similar seams of ore are seen in a tunnel just started below the big cut. This tunnel will have to be driven 200 feet to the contact, gaining a depth of 125 feet below the big cut. Drifts along the contact from the level of the lower tunnel started this year may discover commercial ore-bodies, though the surface exposures are not as remarkable as one would be led to believe from a perusal of the prospectus of the company.

**APPENDIX II**  
Analytical Procedures and Certificates



## ANALYTICAL PROCEDURES

1. Rock samples are crushed, dried and pulverized to -100 mesh. Vegetation is dried, pulverized to -80 mesh then ashed at 475 degrees centigrade.
2. A 0.50 gram portion of the sample is digested with 3 mls of 3:1:2 HCL-HNO<sub>3</sub>-H<sub>2</sub>O at 95 degrees centigrade for one hour and is diluted to 10 ml with water. This leach is near total for base metals, partial for rock forming elements and very slight for refractory elements.
3. Inductively coupled argon plasma (ICP) technique was used. The detection limits are Ag - 0.1 ppm, Zn - 1 ppm, As, Bi, Pb - 2 ppm, Fe - 0.01%.
4. Gold geochemical analysis used a 10 gram sample ignited at 600 degrees centigrade, digested with hot aqua regia, extracted by MIBK, analysed by graphitic furnace AA. The detection limit is 1 ppb.
5. Gold and silver analysis by fire assay used a 10 gram sample, fused with a Ag inquart with fire assay fluxes. After cupulation, the dore bead is dissolved and analysed by AA or ICP/MS.

GEOCHEMICAL ANALYSIS CERTIFICATE

K.V. Campbell & Assoc. Ltd. PROJECT 90-153 File # 90-2579 Page 1

4 - 84 Lonsdale Ave, North Vancouver BC V7M 2E6 Submitted by: K.V. CAMPBELL

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb
CA-90-153-1	1	124	500	112	26.7	12	1	1064	1.99	4	5	ND	1	8	1.3	13	2	4	.30	.003	2	5	.12	37	.01	2	.30	.01	.01	1	8
CA-90-153-2	11	11	6	20	.7	6	1	237	1.26	13	5	ND	1	5	.2	2	2	7	.03	.014	5	3	.19	51	.01	12	.49	.01	.11	1	1
CA-90-153-3	4	5	5	11	.4	11	3	457	1.30	22	5	ND	1	4	.2	2	2	5	.04	.019	4	7	.05	17	.01	2	.29	.01	.07	1	1
CA-90-153-4	4	4	3	6	1.0	10	3	312	1.39	13	5	ND	1	3	.2	2	2	4	.03	.018	5	8	.03	25	.01	10	.20	.01	.07	1	1
CA-90-153-5	1	61	41	112	2.0	47	12	502	3.87	16	5	ND	1	11	.2	4	2	30	.20	.030	6	30	1.04	75	.01	3	1.61	.01	.13	1	1
CA-90-153-6	1	11	34	66	.3	9	1	220	.74	2	5	ND	1	64	.5	2	3	4	1.42	.007	2	7	.07	18	.01	2	.20	.01	.04	1	1
CA-90-153-7	3	20	21	115	4.9	20	2	318	1.28	5	5	ND	1	38	.7	2	2	9	.61	.017	5	11	.16	28	.01	2	.39	.01	.08	1	2
CA-90-153-8	2	320	20114	43930	26.2	9	3	942	1.47	11	5	ND	1	111	697.7	39	2	4	1.90	.007	2	1	.41	27	.01	2	.47	.01	.10	2	1
CA-90-153-9	21	5006	9420	22201	275.4	9	2	296	1.10	40	5	ND	1	49	350.3	866	2	8	.52	.009	2	4	.12	39	.01	2	.22	.01	.07	6	800
STANDARD C/AU-R	18	57	38	132	7.3	72	31	1003	3.91	38	18	8	38	52	18.5	16	19	57	.50	.092	39	59	.92	182	.09	34	1.94	.06	.13	13	520

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: P1 Rock P2 Soil/Silt AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: JUL 16 1990 DATE REPORT MAILED: July 20/90 SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

✓ ASSAY RECOMMENDED

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Tl %	B ppm	Al %	Na %	K %	M ppm	Au* ppb
153-SL-1	6	84	122	223	10.3	29	26	1445	6.35	55	7	ND	1	7	2.5	10	2	25	.05	.102	13	17	.67	85	.02	2	1.62	.01	.06	2	7
153-ST-201	4	80	28	211	1.5	35	19	1631	4.78	33	6	ND	1	57	3.7	8	2	42	.81	.187	23	25	1.13	209	.05	2	1.89	.01	.10	1	3

ACME ANALYTICAL LABORATORIES LTD.  
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DATE RECEIVED: JUL 26 1990

DATE REPORT MAILED: Aug 1/1990

### ASSAY CERTIFICATE

K.V. Campbell & Assoc. Ltd. PROJECT 90-153 FILE # 90-2579R  
4 - 84 Lonsdale Ave, North Vancouver BC

SAMPLE#	Pb %	Zn %	Ag oz/t
CA-90-153-8	2.23	5.24	.82
CA-90-153-9	.99	2.46	36.96

- 1 GM SAMPLE LEACHED IN 50 ML AQUA - REGIA, ANALYSIS BY ICP.
- SAMPLE TYPE: Rock Pulp

SIGNED BY. *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS